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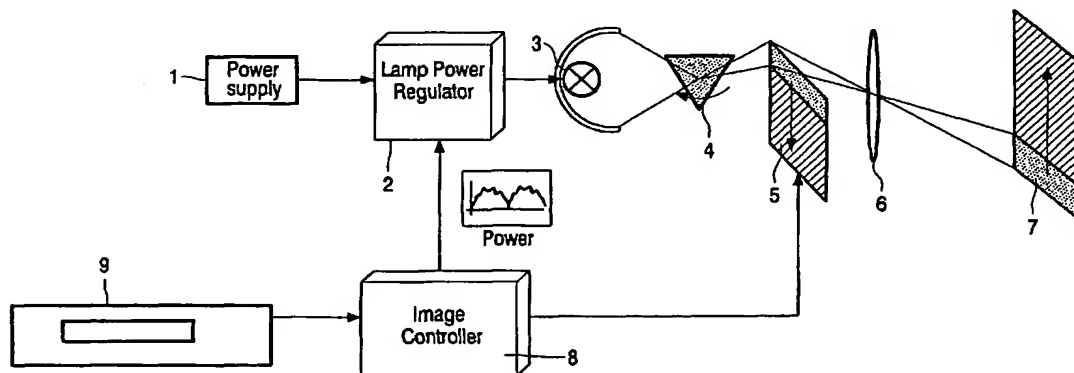
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(54) Title: **IMAGE PROJECTOR WITH LIGHT SOURCE MODULATION ACCORDING TO IMAGE SIGNAL**



(57) Abstract: The invention relates to a method for enhancing brightness and contrast in images provided by a projection-based presenter utilising a display panel (5) illuminated by at least one scrolling band of light and a lamp (3) as a light source for said at least one scrolling band of light. In order to enable such an enhancement, it is proposed that the method comprises modulating the light output of the lamp (3) between different scrolling positions in a way that a higher light intensity is supplied by said lamp (3) when parts of the display panel (5) currently representing brighter parts of a respective image are illuminated by said at least one scrolling band of light than when parts of the display panel (5) currently representing less bright parts of said image are illuminated by said at least one scrolling band of light. The invention relates equally to a corresponding projector, and to an image processor and a regulation and controlling system for such a projector.

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*For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.*

## INTERNATIONAL SEARCH REPORT

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**A. CLASSIFICATION OF SUBJECT MATTER**  
IPC 7 H04N9/31

According to International Patent Classification (IPC) or to both national classification and IPC

**B. FIELDS SEARCHED**

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 H04N

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

**C. DOCUMENTS CONSIDERED TO BE RELEVANT**

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	WO 02 01884 A (KONINKL PHILIPS ELECTRONICS NV) 3 January 2002 (2002-01-03) the whole document ---	1-13
A	US 6 361 172 B1 (BRENNESHOLTZ MATTHEW) 26 March 2002 (2002-03-26) the whole document ---	1-13
A	PATENT ABSTRACTS OF JAPAN vol. 2000, no. 04, 31 August 2000 (2000-08-31) -& JP 2000 028960 A (NEC CORP), 28 January 2000 (2000-01-28) abstract --- -/--	



Further documents are listed in the continuation of box C.



Patent family members are listed in annex.

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- \*G\* document member of the same patent family

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C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT		
Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	<p>"SINGLE PANEL PROJECTOR LIGHTPATH" RESEARCH DISCLOSURE, KENNETH MASON PUBLICATIONS, HAMPSHIRE, GB, no. 418, February 1999 (1999-02), page 221 XP000893238 ISSN: 0374-4353</p> <p>-----</p>	

## INTERNATIONAL SEARCH REPORT

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Patent document cited in search report		Publication date		Patent family member(s)	Publication date
WO 0201884	A	03-01-2002	US	6563551 B1	13-05-2003
			WO	0201884 A2	03-01-2002
			EP	1300027 A2	09-04-2003
US 6361172	B1	26-03-2002	WO	0172047 A1	27-09-2001
			EP	1183876 A1	06-03-2002
JP 2000028960	A	28-01-2000	NONE		